REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Official Action of August 17, 2005 (hereinafter "Office Action") and the Final Office Action mailed December 6, 2005 (hereinafter "Final Action"). Applicant further appreciates the courtesy extended by the Examiner during the telephonic interview of December 30, 2005. In response, Applicant has amended independent Claims 1 and 9 to more clearly define the terms "sides" and "between" to clarify the distinctions between the recitations of these claims and the prior art, as suggested by the Examiner. More particularly, Claims 1 and 9 have been amended to recite "a printed circuit board having first and second opposite sides", wherein "the printed circuit board and the first and second opposite sides thereof are between the antenna and the parasitic resonator".

Entry of the present amendment and allowance of all claims is respectfully requested, because the cited art fails to teach or suggest the claimed mobile terminals. In the alternative, Applicant requests entry of this amendment as narrowing issues for further consideration on appeal, in particular, to clarify the meaning of the printed circuit board being "between" the antenna and the resonator. Moreover, these amendment were made responsive to the request of the Final Action, which stated that "[t]he Examiner invites the applicant to amend their claims to more narrowly define exactly what they mean by the terms 'sides' and 'between', so that they separate themselves from the prior art of record." Final Action, Page 2.

Favorable reconsideration of these claims is respectfully requested for at least the reasons discussed below. In the interest of brevity, Applicant's remarks below will focus on the "Response to Arguments" section beginning on page 2 of the Final Action. To ensure that Applicant's remarks are fully responsive to the Final Action, Applicant's previous Request for Reconsideration mailed November 16, 2005 is hereby incorporated by reference herein.

Interview Summary

During the telephone interview of December 30 2005, the present amendments to the claims were discussed with the Examiner. In particular, Claim 1 has been amended to recite "a printed circuit board having first and second opposite sides" and to recite that "the printed circuit board and the first and second opposite sides thereof are between the antenna and the parasitic resonator", to clarify that the antenna and the parasitic resonator are on *opposite* sides of the printed circuit board. Independent Claim 9 has been similarly amended. Applicant submits that these amendments are fully supported by the present specification, and as such, no new matter has been added. The Examiner also raised questions as to how these amendments overcome the outstanding rejections under 35 U.S.C. §103(a) as being obvious over U.S. Patent 6,456,249 to Johnson et al. (hereinafter "Johnson") in view of U.S. Patent 6,421,016 to Phillips et al. (hereinafter "Phillips") and European Patent Application EP 1030401 to Monma (hereinafter "Monma"). The reasons for patentability of the amended claims in view of the cited references will be described in detail below.

The Information Disclosure Statement

The Office Action states that Applicant's information disclosure statement filed December 20, 2004 failed to comply with the requirements of 37 C.F.R. 1.98(a)(3), and that Applicant's Supplemental Information Disclosure Statement of November 17, 2005 was not received. In response, Applicant submits herewith a copy of the Supplemental Information Disclosure Statement (IDS) of November 17, 2005 including an English language computer translation of Japanese Publication JP 2002-118414 (provided by the Japanese Patent Office website www.jpo.go.jp), along with an English translation of the Abstract thereof to satisfy the requirements of 37 C.F.R. 1.98(a)(3). The Supplemental IDS further includes a copy of Japanese Publication JP 2002-118414 for the Examiner's convenience. The attached copies of the Supplemental Information Disclosure Statement and the form PTO-1449 were printed from the U.S. Patent Office Patent Application Information Retrieval (PAIR) System, and bear the U.S. Patent Office stamp indicating receipt on November 21, 2005. Accordingly, consideration of the documents cited therein is respectfully requested.

Independent Claims 1 and 9 Are Patentable Over the Cited References

Claims 1-16 stand rejected under 35 U.S.C. §103(a) as obvious over Johnson in view of Phillips and Monma. However, Applicant respectfully submits that the combination of these references fails to disclose or suggest many of the recitations of the pending claims. Claim 1, for example, recites:

> 1. A mobile terminal comprising:
>
> a printed circuit board having first and second opposite sides and having a reference voltage conductor therein;
>
> an antenna coupled to the first side of the printed circuit board; and
>
> a parasitic resonator having first and second couplings to the second side of the printed circuit board wherein the printed circuit board and the first and second opposite sides thereof are between the antenna and the parasitic resonator,
>
> wherein the first coupling to the printed circuit board provides a first impedance between the parasitic resonator and the reference voltage conductor, and wherein the second coupling to the printed circuit board provides a second impedance between the resonator and the reference voltage conductor wherein the first and second impedances are different. (*Emphasis added*).

In the "Response to Arguments" section, the Final Action asserts that "the PCB can be interpreted as being 'between' the antenna and resonator if said antenna and resonator are connected to different sides of the PCB", and that "combining Johnson and Phillips would disclose the antenna at the top side (per Phillips) not being connected to the bottom side (as shown in Johnson)". *See* Final Action, Page 2.

However, Applicant respectfully submits that the combination of Johnson, Phillips, and Monma fails to teach or suggest at least the recitations of Claim 1 highlighted above. More particularly, Phillips describes an antenna system including a resonator **104** and an antenna **102** coupled to a printed circuit board **108** by a conductive connection **208**. *See* Phillips, Fig. 2. As described in Phillips, "the antenna **102** can be located anywhere on the conductive connection **208** *between* the first and second conductor **104**, **108**. *See* Phillips, Col. 4, lines 52-58. (*Emphasis added*). In other words, Phillips provides that *the antenna* **102** is located between the printed circuit board **108** and the resonator **104**.

In contrast, Claim 1 recites an antenna and a parasitic resonator coupled to opposing first and second sides of a printed circuit board, and "the printed circuit board and the first and second opposite sides thereof are between the antenna and the parasitic resonator". In other words, Claim 1 recites that the antenna and the resonator are on opposite sides of the printed circuit board, such that *the printed circuit board* is between the antenna and the resonator.

Applicant respectfully submits that Phillips does not disclose or suggest that the antenna **102** and the resonator **104** are coupled to *opposite* sides of the printed circuit board **108**, or that the printed circuit board **108** is *between* the antenna **102** and the resonator **104**. For example, referring to Figure 2 of Phillips, even if the antenna **102** were located at the far leftmost portion of the conductive connection **280** (*i.e.*, on the "top" side of the printed circuit board **108**, as suggested by the Final Action), the antenna **102** and the resonator **104** would not be on *opposite* sides of the printed circuit board **108**. As such, the printed circuit board **108** (and the opposite sides thereof) is not *between* the resonator **104** and the antenna **102**, because, as described in Phillips, the *antenna* **102** is between the printed circuit board **108** and the resonator **104**. Accordingly, Applicant submits that Phillips does not disclose or suggest all of the recitations of Claim 1.

Monma also does not disclose or suggest these missing recitations. Monma describes a space selective diversity antenna including a whip antenna **202** and a plane antenna **203**. *See* Monma, Fig. 2. However, the cited portions of Monma do not illustrate an orientation of a printed circuit board between the whip antenna **202** and the plane antenna **203**, and the Final Action does not identify portions of Monma to provide these teachings.

Nor does Johnson disclose or suggest these recitations. Rather, Johnson illustrates *twelve* different embodiments of an antenna assembly, each of which includes a parasitic resonator **18** and an antenna **16** on the *same* side of a printed circuit board **22**. *See* Johnson, Figs. 1-19. In other words, none of the twelve embodiments of Johnson discloses or suggests the antenna **16** and the parasitic resonator **18** on *opposite* sides of the printed circuit board **22**, such that the printed circuit board **22** (and the opposite sides thereof) is between the antenna **16** and the parasitic resonator **18**. Accordingly, Applicant submits that Johnson does not suggest the desirability of moving the antenna to an opposite side of the printed circuit board so that "the printed circuit board and the first and second opposite sides thereof are between the antenna and the parasitic resonator", as recited by Claim 1. Moreover, as Johnson provides twelve separate embodiments having the antenna **16** and the parasitic resonator **18** on the same side of the printed circuit board **22**, Applicants submit that Johnson teaches away from the present invention, and fails to suggest the desirability of combination with the teachings of Phillips and/or Monma.

In view of the above, Applicant submits that the combination of the cited references to Johnson, Phillips, and Monma fails to disclose or suggest all of the recitations of Claim 1, and that it would not be obvious to combine these references. For at least these reasons, Applicant submits that Claim 1 is patentable over the cited references. Independent Claim 9 is patentable for at least similar reasons. In addition, dependent Claims 2-8 and 10-16 are patentable at least per the patentability of Claims 1 and 9 from which they respectively depend.

Conclusion

For at least the reasons discussed above, Applicant submits that Claims 1-16 are patentable over the cited references, and that the claims are, therefore, in condition for allowance. Applicant encourages the Examiner to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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